ABSTRACT

A regression analysis is carried out (8) using pixel signals having a K-th spectral characteristic as the explanatory variable and pixel signals having an L-th spectral characteristic as the purpose variable in a plurality of pixel positions in an area neighboring a pixel of interest to obtain a pixel signal having the L-th spectral characteristic (9). Pixel signals obtained by low-pass filtering (7a-7c) of the output signals of an imaging device may be used as the explanatory variable and the purpose variable. The occurrence of false colors is thereby reduced when, in a group of pixel signals from pixels arrayed on a two-dimensional plane, each pixel having one of a plurality of spectral characteristics, the missing colors at each pixel position are obtained by interpolation.